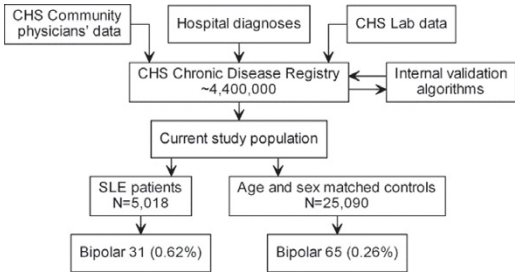
Objectives: The objective of this study was to investigate the association between SLE and Bipolar Disorder (BD) using big data analysis methods.
Methods: Patients with SLE were compared with age- and sex-matched controls regarding the proportion of BD in a cross-sectional study. Chi-square and t-tests were used for univariate analysis and a logistic regression model was used for multivariate analysis, adjusting for confounders. The study was performed utilizing the chronic disease registry of Clalit Health Services medical database.
Results: The study included 5,018 SLE patients and 25,090 matched controls. BD was found in a higher proportion among SLE patients compared to controls (0.62% vs. 0.26%, respectively, $p<0.001$). BD patients had a greater proportion of smokers compared to non-BD patients (62.5% vs 23.5%, respectively, $p<0.001$). In a multivariate analysis, smoking and SLE were both found to be significantly associated with BD.

Multivariate logistic regression model of covariates associated with Bipolar disorder

	OR	CI	p
Age	1.01	1.00, 1.02	0.137
Gender: Female	1.63	0.96, 2.97	0.087
SES:			
Medium vs. Low	1.06	0.66, 1.69	0.816
High vs. Low	1.17	0.67, 1.98	0.575
Smoking	4.80	3.16, 7.39	<0.001
SLE	**1.74**	**1.11, 2.66**	**0.012**

SES: Socioeconomic status, SLE: Systemic lupus erythematosus.



Conclusions: SLE was found to be independently associated with BD. These findings may imply that an autoimmune process affecting the central nervous system among lupus patients facilitates the expression of concomitant BD.
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Disclosure of Interest: None declared
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THU0249 SUBCLINICAL HAND ARTHROPATHY IN PATIENTS WITH SYSTEMIC LUPUS ERITHEMATOSUS

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Background: As well as other systemic inflammatory diseases with joint compromise, there is an interest to identify the presence of synovitis in systemic lupus erythematosus (SLE) patients, in every follow up consultation. In SLE, the research about subclinical synovitis (that, which is clinically unnoticed but demonstrable by means of image studies) is quiet limited. The majority of studies focused on the use of ultrasound (US) assessment of patients with SLE included non selected patients so many of them counted with patients with chronic synovitis or even deformities. Due to that their results are difficult to compare and the real prevalence of subclinical synovitis is still unknown.
Objectives: To determine the prevalence of synovitis in a selected cohort of patients without clinical evidence of arthritis or synovitis.
Methods: We performed a prospective study on 96 SLE patients grouped as follows: Group 0 (20) without no historical or present joint symptoms, Group 1 (34) with intermittent joint pain and Group 2 (42) with intermittent arthritis without deformities or erosions. A systematic US study of the carpal, 2nd and 3rd MCP joint of the non dominant hand were performed to all patients. US findings were expressed according to the nomenclature EULAR recommendations for synovitis, power Doppler signal and composite synovitis index.
Results: Six patients from group 0 showed any grade of synovitis (30%), 13 from group I (38.2%) and 18 from group II (42.8%). From the whole group of subjects, those with at least a synovitis finding was 37 (38.5%).
Into the 2nd MCP joint, 4 patients (20%) from group 0 showed any grade of synovitis, one of them (5%) with power Doppler (PD) signal. The composite index of synovitis and PD signal (CSI) was 0.3 DE 0.36. In group 1, 9 patients (26.5%) showed any grade of synovitis, 4 of them also showed PD signal (11.8%). The CSI for this group was 0.44 DE 0.48. In group 2, 15 patients (14.3%) showed any grade of synovitis and 6 of them also showed PD signal (14.3%). The CSI for this group was 0.59 DE 0.55. Globally, we detected synovitis in 28/96 patients (29.2%) and PD signal in 11 (11.5%).
Into the 3rd MCP joint, 5 patients (25%) from group 0 showed any grade of synovitis, one of them (5%) also had PD signal. The CSI for this group was 0.3 DE 0.36. In group 1, 8 patients had synovitis (23.5%), 3 of them also showed PD signal (8.8%). The CSI for this group was 0.38 De 0.46. In group 2, 15 patients showed any kind of synovitis (35.7%), 4 of them with PD signal (9.5%). CSI index for this group was 0.57 DE 0.61. Globally there where 27/96 patients with synovitis (28.1%) and 8 with PD signal.
Into the carpal dorsal aspect, 5 patients of group 0 has synovitis (25%) and 3 PD signal (15%). CSI was 0.5 DE 0.54. In group 1, 12 patients had synovitis (35.3%) and 5 PD signal (14.7%) CSI was 0.58 DE 0.54 In group 2, 16 patients has synovitis (38.1%) and 8 PD signal. CSI was 0.61 DE 0.51. Globally, 33/96 has synovitis (34.4%) and 16 PD signal (16.7%).
Conclusions: As far as our knowledge goes, this is the first US prevalence study in SLE patients where all deforming and erosive arthritis have been excluded. We have demonstrated that approximately one third of patients without joint symptoms had any grade of synovitis detectable by ultrasonography. The prognosis meaning of our findings will require further prospective initiatives.
Disclosure of Interest: None declared
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THU0250 EFFECT OF FETAL UMBILICAL ARTERY DOPPLER ON PREDICTION OF ADVERSE PREGNANCY OUTCOMES IN WOMEN WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Pregnancies in women with SLE resulted in an increase of adverse pregnancy outcomes (APOs). The predictive value of fetal umbilical artery Doppler examinations for APOs has been reported, while not widely be assessed in SLE pregnant women.
Objectives: To ascertain the predictive value of fetal umbilical artery Doppler for fetal APOs in SLE pregnancies.
Methods: A fetal Doppler ultrasound examination was performed on all fetuses during the third trimester (28～36 weeks of gestation) and the term pregnancy (37～42 weeks of gestation). The Doppler flow parameters of umbilical arteries were recorded, including pulsatility parameter (PI), resistance index (RI), the peak value of umbilical arteries at end-systole (Vmax, also abbreviate as S) and the peak value of umbilical arteries at end-diastole (Vmin, also abbreviate as D). The value of S/D was automatically calculated. Clinical data and pregnancy outcomes were also analyzed retrospectively.
Results: In total, 109 cases of pregnant SLE women performed fetal umbilical artery Doppler at the third trimester and 82 at the term pregnancy. Among the 109 cases, 65 resulted in one or more APOs, including 45 with premature delivery, 23 with intrauterine growth restriction (IUGR), 16 with fetal distress, 8 with neonatal lupus (NLE) and 3 with congenital malformation. Fetus with APOs had higher S/D values compared with fetus without APOs (2.9±0.9 VS. 2.4±0.5, P=0.001). In addition, other Doppler indexes did not differ significantly across groups. The area under the receiver operating characteristic curve was 0.7 (P=0.003) for S/D values, with the optimal cutoff of 2.8. At this cutoff, sensitivity (46.2%) and specificity (90.9%) had the best combination, whereas the positive and negative predictive values were 83.3% and 52.1%, respectively. Among the 82 cases with term pregnancy, 23 resulted in APOs, including 11 with IUGR, 15 with fetal distress, 4 with NLE and 1 with congenital malformation. All of the Doppler indexes (S/D, PI, RI, Vmax and Vmin) in fetus with APOs were higher than those without APOs, but no statistical significance were found between the 2 groups.
Conclusions: Umbilical artery Doppler was a good monitor method for APOs in the third trimester. S/D values were sensitive and specific predictors for APOs in pregnancies complicated by SLE. Women with more than 2.8 S/D could start strict monitoring to rapidly identify and treat obstetric complications.
Disclosure of Interest: None declared
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THU0251 DIFFERENT RESPONSES TO INDUCTION THERAPY IN TWO ONSET CATEGORIES OF LUPUS NEPHRITIS

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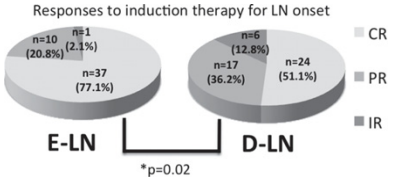
Background: We previously reported different clinical features, serological profiles and activities in two onset categories of lupus nephritis (LN): LN that

developed as a flare of systemic lupus erythematosus (SLE) after treating the prior non-renal SLE conditions successfully (delayed, D-LN) and LN manifesting at the time of SLE onset (early, E-LN).[1)] More frequent flares and higher serum titers of anti-dsDNA antibody during the LN flares were observed in D-LN than E-LN groups, suggesting that D-LN may reflect intractable SLE conditions. However, we had not analyzed whether there is a difference in the response to treatment between the two groups.

Objectives: This study investigated possible differences in the response to induction therapy between E-LN and D-LN.

Methods: We retrospectively examined 95 LN (48 E-LN, 47 D-LN) patients who attended our hospital between January 1991 and May 2016. All of them were diagnosed with SLE according to the American College of Rheumatology criteria and were shown to have LN on renal biopsy. First, we compared the clinical features of E-LN and D-LN, such as sex, age at SLE and LN onset, urinary protein, serum creatinine, serum anti-dsDNA titer, serum C3, prevalence of serum anti-Sm, renal biopsy histological types and induction therapy options at LN onset. Then we compared the response to therapy at 24 weeks for LN onset and flares between the two groups. The response to treatment was classified into complete response [CR; urine protein to creatinine ratio $<$50 mg/mmol and normal or near-normal (within 10%)GFR], partial response [PR; $\geq$50% reduction in proteinuria to sub-nephrotic levels and (near-) normal GFR], and insufficient response [IR; anything else]. We analyzed the data using chi-square test, Fisher's exact test and the Mann–Whitney *U*-test. We further evaluated predictors of treatment response at LN onset using univariate and forward stepwise multivariate Cox regression analysis.

Results: Higher serum C3 (56.4±22.4 *vs.* 46.3±22.7 mg/dl, p=0.03) were observed in D-LN groups. The proportion of histological types (I or II/III or III+V/IV or IV+V/V: 6/7/26/9 *vs.* 4/5/26/12, p=0.77) and induction therapy options at LN onset were similar between the two groups. However, the response to the therapy for LN onset was better in E-LN than D-LN (CR/PR/IR: 37/10/1 *vs.* 24/17/6, p=0.02) (Fig). Univariate Cox regression analysis indicated that severe proteinuria, elevated serum creatinine, class IV or IV+V on renal biopsy and D-LN were associated with non-CR (PR+IR) to induction therapy for LN onset ($p<0.05$). Multivariate Cox regression analysis including variables identified as significant in univariate analyses showed that severe proteinuria [hazard ratio (HR) 1.35, p=0.007] and D-LN [HR 4.96, p=0.003] were independent predictors of non-CR to the induction therapy. LN flares were observed in 13/48 E-LN and 20/47 D-LN patients, and IR was observed in 15.4% (2/13) of E-LN and 40.0% (8/20) of D-LN patients.



Conclusions: In this study, the relatively poorer treatment response was observed in D-LN compared with E-LN patients and D-LN was a predictor of poorer treatment response independent of renal histology and the severity of nephritis at LN onset.

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Disclosure of Interest: None declared

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THU0252 NAILFOLD CAPILLAROSCOPY IN SYSTEMIC LUPUS ERYTHEMATOSUS: A SYSTEMATIC REVIEW AND CRITICAL APPRAISAL

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Background: Systemic lupus erythematosus (SLE) is a rheumatic disease with common vascular involvement. Nailfold capillaroscopic changes have been described in SLE. Although, until today there is no clear role yet for capillaroscopy in classifying or staging the disease.

Objectives: To systematically review and critically appraise the literature on capillaroscopic changes described in SLE.

Methods: A sensitive search, on behalf of the EULAR study group on microcirculation in Rheumatic Diseases, was developed in Web Of Science, PubMed and Embase to identify all original research studies in which SLE patients had capillaroscopy. Two reviewers identified titles, abstracts and full texts. Exclusion criteria were: ACR criteria for SLE were not met, less than 5 patients were included in the study, there was no information on capillaroscopy in SLE, no original research or non-English language. All included articles underwent quality appraisal. Results were summarised according to density, dimensions, morphology, haemorrhages, semi quantitative assessment, qualitative assessment (see table) and correlation of capillaroscopic changes with clinical and laboratory parameters.

Results: From 172 articles captured, 36 articles were included in this review. The following capillaroscopic parameters were significantly more prevalent in SLE patients compared to healthy controls (see table): tortuous capillaries, abnormal morphology, haemorrhages, nailfold capillaroscopic score, "non-specific patterns" and "scleroderma like pattern". Hairpin shaped capillaries were significantly more prevalent in healthy controls compared to SLE patients. For clinical and laboratory parameters, Raynaud's phenomenon (RP), gangrene and 24 hours proteinuria were significantly correlated with capillaroscopic changes.

				Significant	Non-significant	Conclusion
Quantitative evaluation	Density	Mean density		4 studies	4 studies	Non-conclusive
		Avascularity		2 studies	0 studies	
	Dimensions	Diameter	Mean limb diameter	4 studies	2 studies	Non-conclusive
			Mean width	2 studies	2 studies	
			Enlarged width	4 studies	0 studies	
			Giant	1 study	0 studies	
		Length		3 studies	2 studies	Non-conclusive
	Morphology	Normal morphology		3 studies	0 studies	Significant more hairpin morphology in healthy controls compared to SLE patients and more tortuous capillaries in SLE patients compared to healthy controls
		Abnormal morphology		5 studies	0 studies	Significant more abnormal morphology in SLE patients compared to controls
	Haemorrhages			2 studies	0 studies	Significant more haemorrhages in SLE patients compared to controls
	NFC score			2 studies	0 studies	Significant higher NFC score in SLE patients compared to controls
Qualitative evaluation	Other patterns			1 study	0 studies	Significant more nonspecific and scleroderma-like pattern in SLE patients compared to controls

Conclusions: This first systematic review on capillaroscopy in SLE attests conclusive significant differences in morphology, haemorrhages, semi quantitative assessment, qualitative assessment and some clinical and laboratory parameters. Further large scale research is ongoing through the EULAR study group on microcirculation in Rheumatic Diseases to further define its role.

Disclosure of Interest: None declared

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THU0253 TRIPLE POSITIVITY TO ANTIPHOSPHOLIPID ANTIBODIES IN PRIMARY ANTIPHOSPHOLIPID SYNDROME: INCREASED RISK OF ARTERIAL THROMBOSES AND ABORTIONS

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Background: Triple positivity (TP) to antiphospholipid antibodies (aPL) has been associated with increased risk of thrombotic and gestational events in different populations of antiphospholipid syndrome (APS) patients. Nonetheless, the majority of the studies evolved APS secondary to systemic lupus erythematosus (SLE).

Objectives: To investigate whether TP increases the risk of criteria and non-criteria manifestations in primary APS (pAPS) patients.

Methods: A cross-sectional study was performed in a group of 74 outpatients who fulfilled APS classification criteria (Sydney; N=67) or with thrombocytopenia and persistent circulating aPL, but no criteria manifestations of APS (N=7), seen in our department. Clinical and serological features collected during medical

Table 1. Demographic and clinical characteristics

Variable	Triple positivity (N=19)	No triple positivity (N=55)	P value
Age	41.7±10.3	44±13.5	NS
Female gender	17 (89.5)	44 (80.0)	NS
Caucasian	14 (73.7)	37 (67.3)	NS
Time first manifestation (mo)	143 (97–240)	124.7 (67–176)	NS
Time diagnosis (mo)	55 (26–134)	64 (43–103)	NS
Criteria manifestations*			
Thrombotic	17 (89.5)	45 (81.8)	NS
Arterial	10 (52.6)	17 (30.3)	NS
Venous	10 (52.6)	35 (63.6)	NS
Abortion 3+	3 (20.0)†	1 (2.8)††	p=0.043
Thrombotic + obstetric	10 (58.8)‡	10 (23.8)‡‡	p=0.008
Non criteria			
Livedo	9 (47.4)	11 (20.0)	p=0.023
Thrombocytopenia	7 (36.8)	10 (18.2)	NS
Valvulopathy**	2 (10.5)	6 (10.9)	NS
Raynaud phenomenon	7 (36.8)	12 (21.8)	NS
Leg ulcers	1 (5.3)	4 (7.3)	NS
Nephropathy	0	1 (1.8)	NS
Migraine	8 (42.1)	25 (45.5)	NS

*N=67; **N=49; †N=15; ††N=36; ‡N=17; ‡‡N=42. Mo = months. NS = not significant, NA = not applicable. Values showed as N (%) for categorical variables, Mean ± SD for normal distribution and Median (interquartil range) for asymmetrical distribution.